

### ABSTRACT OF THE DISCLOSURE

A system and method are provided for sonication-enhanced digestion of cellular matter. The method includes supplying cellular matter to a bioreactor, sonically disrupting the cellular matter, and providing the disrupted cellular matter for microbial digestion in the bioreactor. The system includes a bioreactor for cellular matter, the bioreactor having an inlet and an outlet; a sonic energy source connected to the bioreactor; and at least one rotating member connected to the bioreactor. The cellular matter enters the bioreactor through the inlet, is mixed by the rotating member and is subjected to sonic energy and microbial digestion in the bioreactor.